



October 27, 2021

Mitchell Yelsky, Esq
Yelsky & Lonardo, LLC
323 W Lakeside Ave, Suite 450
Cleveland, OH 44113

Re: DDC # F21-25461; Jesus Bey

Dear Mr. Yelsky:

On 7/19/21 I received DNA discovery material from the Cuyahoga County Regional Forensic Science Laboratory (CCRFSL 2020-000328) regarding Mr. Bey's case. The discovery included reports, laboratory notes, worksheets, forms, serological results, electropherograms (raw data), allelic charts, statistical calculations, and technical and administrative review. After reviewing the file we had the opportunity to discuss the case and you asked me to summarize my findings. My curriculum vitae is being submitted with this report.

A Glock 26 9mm serial # ADGK947 was swabbed with two swabs at the Public Safety Central after the firearm was secured according to information provided by Detective Kevin Warnock #1719 in the CCRFSL evidence submission sheet on 1/31/20. The Inbound Evidence Receipt listed only the DNA swabs from the Glock 26 9mm that were submitted for DNA analysis from Detective Kevin Warnock and received by Wendi DAndrea at CCRFSL on 1/31/20. It is not stated in the discovery where on the gun it was swabbed and CCRFSL consumed half of each swab for DNA analysis. The Cleveland Division of Police Detail Report dated 10/19/20 listed the property collected in this case, which included DNA swabs from the Glock 26 9mm, the magazine belonging to the Glock 26 9mm, and 11 live rounds, however, the magazine and 11 live rounds were not submitted for testing. Further DNA analysis of the magazine and the live rounds could be helpful with respect to obtaining more information regarding who may have touched these items.

CCRFSL reported on 4/22/20 that a mixed DNA profile consisting of four contributors was obtained from swabs of a Glock 26 9mm serial # ADGK947 (item 2). A match was identified between item 2 and Jesus Bey. This match is 14.2 quadrillion times more probable than a coincidental match to an unrelated individual.



CCRFSL reported on 8/27/20 that a match was identified between the mixed DNA profile obtained from swabs of a Glock 26 9mm serial # ADGK947 (item 2) and Bryant Cayson, and that this match is 18.4 trillion times more probable than a coincidental match to an unrelated individual.

When DNA is detected on an item of evidence it is not known when it was deposited. Since DNA can remain on an item indefinitely, unless it is wiped off or exposed to environmental insults, it could have been transferred to the item recently or some time ago. In this case it is not known when DNA from each of the four contributors was deposited onto the Glock 26 9mm. It is also not known how the DNA was deposited onto the firearm. The DNA could have been directly deposited onto the firearm by handling it or the DNA could have been indirectly transferred. In other words, a contributor may not have directly come in contact with the Glock 26 9mm but their DNA could be on the item via an intermediary surface such as a handshake for example.

Based on my analysis of the data in the discovery, I agree with the findings from CCRFSL in this case. If you have any questions please contact me at 800-406-1940.

Sincerely,

A handwritten signature in cursive script that reads "Julie A. Heinig".

Julie A. Heinig, Ph.D.
Laboratory Director of Forensics
DNA Technical Leader
DNA Diagnostics Center
jheinig@dnacenter.com

CURRICULUM VITAE:

JULIE A. HEINIG

ADDRESS:

DNA Diagnostics Center
One DDC Way, Fairfield, Ohio, 45014
phone: (513) 881-7806 ext.# 2283
jah@dnacenter.com

EMPLOYMENT:

09/13-present **DNA Technical Leader- Forensics**
DNA Diagnostics Center
Fairfield, Ohio

01/03-present **Assistant Laboratory Director - Forensics**
DNA Diagnostics Center
Fairfield, Ohio

10/98-10/02 **Senior Forensic Scientist/DNA Analyst**
Cuyahoga County Coroner's Office
Cleveland, Ohio

01/96 **Instructor**, Department of Life Sciences, Scarborough Campus, University of
Toronto - "Cell Junction" component of Cell Biology, upper level undergraduate
course.

09/89-09/94 **Teaching Assistant**, Department of Life Sciences, Scarborough Campus,
University of Toronto. Prepared materials, presented lectures, and assisted
students with undergraduate lab coursework in Introductory Biology, Plant
Morphology and Histology.

04/91 **Research Technician II**, Bedford Institute (SS Dawson Research Vessel),
Dartmouth, Nova Scotia. Conducted experiments on the gills of scallops and
prepared the gill tissue for electron microscopy.

EDUCATION:

2003 **Online Coursework** - University of Florida
Structure and Function of Nucleotides PHA5436.
May 12 - August 4, 2003
Scientific Evidence and Statistics (Univ. of Edinburgh)
August 25 - December 8, 2003

2001 **Ph.D.** University of Toronto, Toronto, Ontario
Department: Anatomy and Cell Biology
Area of Study: Molecular Endocrinology and Development
Title: "Molecular Studies of Pituitary Hormones During the Life Cycle of the
Lamprey"

1993 **M.S.** University of Toronto, Toronto, Ontario
Department: Zoology.
Area of Study: Physiology and Morphology
Title: "The Morphology of the Anterior Intestine in Juvenile Anadromous Sea
Lampreys, *Petromyzon marinus* L., Following Gradual Acclimation and Direct
Transfer to Seawater"

1988

B.S. Honours Biology Program at University of Toronto, Scarborough Campus.

EXPERIENCE:

Case Review and Consultation - provide case review for defense attorneys by reviewing all pertinent discovery material to ensure the results are reliable, and the interpretation of the results support the conclusions. Consult with attorneys about their case, explain serological and DNA analysis (if requested) and provide litigation questions for cross examination.

Observe DNA Testing at Crime Laboratories – observe the entire DNA analysis process of evidentiary samples at other laboratories to ensure the results and conclusions are reliable.

Forensic Accreditation – Prepare for and obtain accreditation from NFSTC ISO/IEC 17025 and DAB standards (September 23, 2003); obtain NYSDOH to perform forensic casework in N.Y. (July 28, 2004); obtain ASCLD/LAB-*International* (June 10, 2005).

DNA Analysis – examine evidence, perform serology, extract DNA, quantify DNA (slot blot and RT-PCR), perform DQ-A1 and Polymarkers, Restriction Fragment Length Polymorphism (RFLP), STR (Profiler Plus, Cofiler, PowerPlex 16, Identifiler) and Yfiler DNA typing for casework.

Bring Short Tandem Repeat (STR) (ABI 3100 and 310) Online for forensic casework - set up the STR analysis (Profiler Plus and Cofiler) at CCCO; validate the STR typing method; write the STR protocol and training manual; develop proper documentation; train DNA analysts on the 310 instrument. Validate the NT system with the 310 instrument.

Set up the forensic lab at DDC; perform forensic validations for serology, DNA analysis, RT-PCR, STRs (Profiler Plus, Cofiler, Identifiler, Globalfiler) and Yfiler (Yfiler Plus), using the 3130 (GeneMapper IdX v. 1.4) and 310 ABI instruments (GeneMapper v. 3.2); write the forensic standard operations manual and training manual and co-write the Quality Assurance manual; recruit and train forensic DNA analysts.

Hand Examination and Analysis of Evidentiary Material for Trace Evidence – while at CCCO examined hands of victims (homicide, suicide, or suspicious death) for blood, defects, hairs, fibers, gun shot residue and trace metal detection; analyzed clothing and evidentiary material visually and with an alternate light source; performed preliminary and confirmatory serological tests on blood/body fluid stains.

Crime Scene Investigation - documentation and collection of evidence.

Prepare Written Case Report and Testify as Expert Witness - interpret Short Tandem Repeat (STR) and Y-STR results; generate probability statistics; write case reports and perform technical review of other scientist's analysis and reports; inform attorneys, forensic analysts and law enforcement officials of our results; testify to my casework and that of other DNA scientists in the lab.

Accreditation Preparation - ensure compliance with ISO 17025 ANAB and NYSDOH standards which includes lab maintenance, proper documentation of

lab and equipment maintenance, critical reagents, STR validations, employee proficiencies; preparation of Protocol, Training, and Quality Assurance manuals.

CODIS Manager and Quality Assurance Manager at CCCO - upload DNA profiles to the Combined DNA Information System (CODIS) at CCCO; maintain the CODIS system and perform administration; assign and monitor proficiency testing; oversee equipment maintenance; manage and maintain quality assurance in the lab.

Seminars, Tours, Workshops and Mock Crime Scenes - Provide seminars, tours, workshops and mock crime scenes at DDC and offsite, as well as previously at CCCO, to various groups (ie. attorneys, schools, universities, law enforcement agencies).

Computer Skills - Microsoft Word; Word; Adobe Photoshop; PowerPoint; Excel; Oligo; Geneworks; DNA Strider; Netscape; statistics programs; DNA and protein databases (ie. GenBank); ABI 310, 3100, and 3130 Collection; Genotyper; Genescan; GeneMapper; CODIS; Popstats; Sequence Navigator; Sequencing Analysis; DNA View.

**SPECIALIZED
TRAINING:**

- 2019 **"The Y-HRD Database: How it Works and How To Use It In Casework"**
Online Webinar – Promega
Dr. Lutz Roewer
May 8th, 2019
- 2019 **"Statistical Genetics and the Mechanisms of Probabilistics Genotyping"**
Online Webinar – NIJ (Forensic Technology Center of Excellence)
Drs. David Balding, Michael Coble, John Buckleton, and Steven Myers
May 8th, 2019
- 2019 **"The Elements of DNA Profile Interpretation and Probabilistic Genotyping"**
Online Webinar - NIJ (Forensic Technology Center of Excellence)
Drs. Tamyra Moretti and Peter Gill
May 5th, 2019
- 2018 **Promega 29th International Symposium on HID**
Phoenix, AZ – September 23-September 25, 2018
- 2018 **Promega 29th International Symposium on HID**
Phoenix, AZ – September 24, 2018
Attended: Workshop: "Systems Thinking and DNA Mixtures: Dynamic Models, Optimization, Validation and Inference"
- 2017 **Midwestern Association of Forensic Scientists 46nd Annual Meeting**
Cincinnati, OH – September 18-22, 2017
- 2016 **Promega 27th International Symposium on HID**
Minneapolis, MN – September 26-September 29, 2016
- 2016 **Promega 27nd International Symposium on HID**

Attended: Workshop: "Validation and Mixture Interpretation Standard Operating Procedures"
Minneapolis, MN – September 26, 2016

2014 **Promega 25nd International Symposium on HID**
Phoenix, AZ – September 29-October 2, 2014

2014 **Promega 25nd International Symposium on HID**
Attended: Workshop: "NGS Advances in Human Forensic Genomics"
Phoenix, AZ – September 29, 2014

2013 **DNA Mixture Interpretation & Statistics using Likelihood Ratios**
MAFS 42nd Annual Meeting Dayton, OH
Instructor: B. Heidelbrecht
Sept. 30-Oct. 1, 2013

2013 **Midwestern Association of Forensic Scientists 42nd Annual Meeting**
Dayton Convention Center, Dayton, OH
October 3-4, 2013

2012 **Promega 23rd International Symposium on HID**
Nashville, TN – October 15-19, 2012

2012 **Promega 23rd International Symposium on HID**
Attended: Workshop: "Mixtures Interpretation"
Nashville, TN – October 15, 2012

2012 **Life Technologies**
"HID Future Trends in Forensic DNA Technology Workshop"
Columbus, OH – September 6, 2012

2012 **Innocence Network Conference**
Kansas City, MO – March 30-31, 2012

2011 **Innocence Network Conference**
Cincinnati, OH – April 7- 10, 2011

2010 **Innocence Network Conference**
Atlanta, GA – April 16- 18, 2010

2009 **Promega 20th International Symposium on HID**
Overview given by Tom Reid, Ph.D.
DDC – October 30, 2009

2009 **Mike Shiver, Ph.D.**
Ancestry DNA/DNA Witness
DDC – October 7, 2009

2009 **UC Law School/Rosenthal Institute for Justice/
Ohio Innocent Project**
Cincinnati Museum Center – August 17, 2009

2009 **Innocence Network Conference**
Houston, TX – March 20 - 22, 2009

2009 **Mike Coble, Ph.D.**
 "mtDNA Testing at AFDIL" (Armed Forces DNA Identification Laboratory)
 DDC – March 10, 2009

2009 **Cassie Johnson, M.S.**
 "STR Analysis in Forensic Casework and Paternity Testing"
 Workshop on Y-STR Mixtures
 DDC – March 5, 2009

2009 **AAFS 61th Annual Meeting**
 Denver Convention Center
 ABI Forum included
 Denver, Colorado - February 18 - 20, 2009

2008 **Promega 19th International Symposium on HID**
 Attended: Workshop 10-16-08 "Troubleshooting Common Laboratory Problems"
 Hollywood, California - October 13 - 16, 2008

2008 **Dr. Odell Owens, M.D.**
 Hamilton County Coroner – "Educate the Living"
 DDC – March 12, 2008

2007 **Dr. T. Reid, Ph.D.**
 Associate Director, DDC
 "Review of International Society for Forensic Genetics Meeting-Copenhagen"
 DDC - September 6, 2007

2007 **Dr. P. Lepont, Ph.D.**
 "Applications of Directional Cell Migration"
 DDC - June 29, 2007

2007 **Dr. J. Sun, Ph.D.**
 "Gene Polymorphisms of Natural Killer Cell Receptors"
 DDC - June 1, 2007

2007 **Dr. Conneally, Ph.D.**
 "The Role of DNA in Forensics and Mass Tragedies"
 DDC - May 18, 2007

2007 **L. Farris**
 "Internalization and Metabolic Activation of E. Coli O157:H7"
 DDC - May 11, 2007

2007 **Forensic e-Symposium, Human Identification**
 "Profiling of Degraded and Low Amounts of DNA"
 Live and Online - March 27, 2007

2006 **DDC Workshop**
 Review of Meetings and Workshops attended by staff
 American Society of Human Genetics, AABB, Promega, MAFS
 DDC - November 10, 2006

2006 **Dr. L. Maddox**
 "Validation and Application of a Duplex qPCR Assay"
 DDC - October 16, 2006

2006 **MAFS 36th Annual Meeting**
Indianapolis, Indiana October 9, 2006 - October 13, 2006
Workshops attended:
Promega's Integrated Solutions in Forensic DNA Technology, October 9, 2006
Review of DNA Testing Results, October 11, 2006

2006 **ABI Real Time 7500 Training - Chemistry and Software**
FAS Catherine Caberello
DDC - August 17, 2006

2006 **Dr. Charles Brenner**
"DNA View and Kinship"
DDC - August 14, 2006

2006 **ABI Real Time 7500 - Installation and Training**
Service Engineer Greg LaCrosse
DDC - August 8, 2006

2006 **Dr. R. Cotton**
"Testing Fundamentals and Preparation for Trials"
DDC - May 17, 2006

2006 **ABI Trends Meeting**
Westin Hotel
Cincinnati, Ohio - April 5, 2006

2005 **Promega 16th International Symposium on HID**
Attended: Statistics workshop; Automated DNA testing workshop;
Promega Trends seminar; SWGDAM meeting
Dallas, Texas - September 25 - 29, 2005

2005 **National Association of Criminal Defense Lawyers Conference**
Barry Scheck
New Orleans, Louisiana - February 10, 2005

2005 **ABI 310 Training and GeneMapper v. 3.2**
FAS Catherine Caberello
DDC - January 18, 2005

2004 **Paternity Testing**
Dr. Chakraborty (University of Cincinnati)
DDC - April 2, 2004

2004 **SNPs**
Applied Biosystems
DDC - February 27, 2004

2004 **Profitable Exhibiting & Better Booth Staffing**
Skyline Exhibits
Springdale, Ohio - February 5, 2004

2003 **National CODIS Conference**
National Conference Center
Lansdowne, Virginia - November 3 - 6, 2003

- 2003 **Association of Forensic Quality Assurance Managers (AFQAM) Conference**
Embassy Suites
Indianapolis, Indiana - October 6 - 9, 2003
- 2003 **Trends in Forensic DNA Technology**
Applied Biosystems
Westin
Cincinnati, Ohio - August 26, 2003
- 2003 **NFSTC Accreditation for Forensic Testing**
In compliance with requirements of ISO/IEC 17025 and DAB standards
Assessors Dr. Lodge and Lucy Davis Houck
DDC - June 9 - 10, 2003
- 2003 **Real Time PCR Seminar**
Catherine Caberello, Applied Biosystems
DDC - April 3, 2003
- 2003 **AAFS 55th Annual Meeting**
Hyatt Regency
ABI Forum and HITA Meeting included; AAFS
Chicago, Illinois - February 19 - 21, 2003
- 2003 **3100 Training**
Carol Schurzinger, Applied Biosystems
DDC - January 14 - 15, 2003
- 2002 **Performance Level Auditing for the Crime Laboratory Workshop**
BCI&I
National Forensic Science Technology Center
Richfield, Ohio - April 17 - 18, 2002
- 2002 **CODIS Meeting**
BCI&I
Cindy Shannon
Richfield, Ohio - March 11, 2002
- 2001 **CODIS Workshop**
Cuyahoga County Coroner's Office
Instructor: Cindy Shannon, BCI&I London, Ohio
Cleveland, Ohio - April 4, 2001
- 2000 **Bloodstain Pattern Analysis Workshop**
Cuyahoga County Coroner's Office
Instructor: Toby Wolson
Cleveland, Ohio - November 13 - 17, 2000
- 2000 **Microscopy Training Workshop**
Cuyahoga County Coroner's Office
Instructor: Jay Mansbach
Cleveland, Ohio - September 14 - 15, 2000

- 2000 **STR Workshop - FBI**
Cuyahoga County Coroner's Office
Instructors: Jill Smerick and Debbie Hobson, DNA Unit I, Washington, D.C.
Cleveland, Ohio - June 19, 2000
- 2000 **Mitochondrial DNA Analysis Course**
Intensive 2 week course including theory, practical laboratory training, mock
trials, sequence interpretation.
Instructors: Alice Isenberg and Mitochondrial Examiners, Unit II, FBI Academy,
Quantico, Virginia - June 5 - 16, 2000
- 2000 **Mock Trial Training - Expert Testimony in DNA**
Cuyahoga County Coroner's Office
Cleveland, Ohio - April 5, 2000
- 2000 **Short Tandem Repeat Workshop (ABI 310 capillary electrophoresis)**
Cuyahoga County Coroner's Office
Course Instructors: Catherine Caberello, Perkin Elmer
Cleveland, Ohio - February 6 - 10, 2000
- 1999 **Mock Trial Training - Expert Testimony in DNA**
DQA1 and Polymarkers and RFLP. Cuyahoga County Coroner's Office,
Cleveland, Ohio - July 10, 1999
- 1999 **Short Tandem Repeat (ABI 310) Workshop - MAFS**
Interpretation of STR data on the ABI 310 CE. Illinois State Police,
Chicago, Illinois - March 9 - 12, 1999
- 1998 **Population Statistics in DNA Analysis**
Cuyahoga County Coroner's Office, Cleveland, Ohio
Course Instructors: Dr. George Carmody, University of Carleton, Ottawa, Canada
and Dr. Jennifer Smith, DNA Unit I, FBI
Washington, D.C. - December 8 - 9, 1998
- 1998 **Mock Trial Training - Expert Testimony in Serology and DNA**
Cuyahoga County Coroner's Office
Cleveland, Ohio - November 22, 1998
- 1998 **Forensic Polymerase Chain Reaction Typing Method D1S80**
Cuyahoga County Coroner's Office-Cleveland, Ohio
Course Instructors: Dr. Mohammed Tahir and Dr. K. Ballamurugan, Marion
County Forensic Laboratory
Indianapolis, Indiana - October 17 - 20, 1998

**INVITED INSTRUCTOR/
GUEST LECTURER**

- 2019 **Lake County Criminal Defense Lawyers Association**
CLE Presentation: "*DNA Today and Beyond*"
Kirtland, OH - October 25, 2019
- 2017 **IL Association of Criminal Defense Lawyers**
CLE Presentation: "*Behind the DNA Report*"
East St. Louis, IL - March 24, 2017

2015 **Ohio Association of Criminal Defense Lawyers**
CLE Presentation: *"Behind the DNA Report"*
Cleveland, OH – October 23, 2015

2015 **Ohio Innocence Project – Law Student Lab Tour and Workshop**
DDC – September 18, 2015

2014 **Lake County Criminal Defense Lawyers Association**
CLE Presentation: *"Behind the DNA Report"*
Kirtland, OH – September 26, 2014

2014 **KY Innocence Project– Law Student Lab Tour and Workshop**
DDC – March 28, 2014

2013 **Northern Kentucky University/KY Innocence Project**
Highland Heights, KY – March 29, 2013

2012 **Ohio Association of Criminal Defense Lawyers**
Death Penalty Seminar Presentation: *"DNA: Basics & Legal Applications"*
Columbus, OH – November 15, 2012

2012 **Innocence Network Conference**
Expert Panelist – Advanced Topics in DNA
Kansas City, MO – March 30-31, 2012

2012 **Northern Kentucky University/KY Innocence Project**
Highland Heights, KY – February 17, 2012

2011 **Innocence Network Conference**
Expert Panelist – Advanced Topics in DNA
Cincinnati, OH – April 7-10, 2011

2011 **Northern Kentucky University/KY Innocence Project**
Highland Heights, KY – February 11, 2011

2011 **University of Kentucky/KY Innocence Project**
Lexington, KY – February 18, 2011

2010 **Dayton Bar Association**
Dayton, OH – November 10, 2010

2010 **Greater Cincinnati Criminal Defense Lawyers Association**
Workshop/Tour - November 8, 2010

2010 **Ohio Innocence Project Director Mark Godsey**
August 16, 2010

2010 **Ohio Innocence Project – Law Student Lab Tour and Workshop**
DDC - August 12, 2010

2010 **Innocence Network Conference**
Expert Panelist – Advanced Topics in DNA
Atlanta, GA – April 16 - 18, 2010

2010 **University of Kentucky/KY Innocence Project**

Lexington, KY – February 5, 2010

2010 **Northern Kentucky University/KY Innocence Project**
 Highland Heights, KY – January 29, 2010

2009 **Kentucky Innocence Project**
 LaGrange, KY - November 3, 2009

2009 **Ohio Criminal Defense Lawyers Association Seminar**
 Columbus, OH – October 23, 2009

2009 **New Orleans Innocence Project**
 New Orleans, LA – September 23, 2009

2009 **Greater Cincinnati Defense Lawyers Association**
 Cincinnati, OH – August 12, 2009

2009 **Kentucky Innocence Project: RFP Presentation**
 Frankfort, KY – May 13, 2009

2009 **Florida Association of Criminal Defense Lawyers**
 Death Penalty Seminar - CLE Seminar:
 Orlando, Florida - March 26, 2009

2009 **Innocence Network Conference**
 Expert Panelist – Advanced Topics in DNA
 South Texas College of Law; Houston, Texas
 March 21, 2009

2009 **Kentucky Department of Public Advocacy**
 Eastern Kentucky University Law School
 “*Forensic DNA Basics & Legal Applications in Sexual Assault Cases*”
 February 6, 2008

2009 **Kentucky Department of Public Advocacy**
 Northern Kentucky University Law School
 “*Forensic DNA Basics & Legal Applications in Sexual Assault Cases*”
 January 30, 2008

2008 **Arkansas Association of Criminal Defense Lawyers**
 CLE Seminar: “*Forensic DNA Basics & Legal Applications*”
 Fayetteville, Arkansas - November 21, 2008

2008 **Ohio Innocence Project and University of Cincinnati Law School**
 Laboratory Tour and DDC Overview
 DDC - July 29, 2008

2008 **FBI - Cincinnati**
 “*Collection of Evidence for DNA Analysis and Mock Crime Scene Workshop*”
 DDC - June 25, 2008

2008 **Kentucky Department of Public Advocacy**
 University of Kentucky Law School
 “*Forensic DNA Basics & Legal Applications in Sexual Assault Cases*”
 February 6, 2008

- 2008 **Kentucky Department of Public Advocacy**
Eastern Kentucky University Law School
"Forensic DNA Basics & Legal Applications in Sexual Assault Cases"
February 1, 2008
- 2008 **Kentucky Department of Public Advocacy**
Northern Kentucky University Law School
"Forensic DNA Basics & Legal Applications in Sexual Assault Cases"
January 30, 2008
- 2007 **Lake County Bar Association's Criminal Law Committee Seminar**
"Forensic DNA Basics & Legal Applications in Sexual Assault Cases"
Milwaukee, Wisconsin - October 5, 2007
- 2007 **Union Township/Amelia Police Departments**
"Collection of Evidence for DNA Analysis and Mock Crime Scene Workshop"
DDC - May 17, 2007
- 2007 **University of Cincinnati Clinical and Lab Science Program**
"DNA Basics, Serology and Evidence Collection Workshop"
DDC - April 12, 2007
- 2007 **Harris County Criminal Defense Lawyers Association**
"Forensic DNA Basics, DNA Evidence Collection/Serology Workshop"
Houston, Texas - March 29, 2007
- 2007 **Lee County Sheriff Office and State Prosecutor Office**
"Collection of Evidence for DNA Analysis and Y-STR Roundtable Workshop"
Ft. Myers, Florida - February 5 - 6, 2007
- 2006 **Ohio Association of Criminal Defense Lawyers**
Death Penalty Seminar - CLE Seminar:
"Forensic DNA Basics & Legal Applications"
Columbus, Ohio - November 16, 2006
- 2006 **Kentucky Department of Public Advocacy**
CLE Seminar:
"Forensic DNA Basics & Legal Applications and Mock Crime Scene Workshop"
DDC - August 25, 2006
- 2006 **Indian Hill Student Program (AP Biology Class – Seniors)**
"DNA Basics, Serology and Evidence Collection Workshop"
DDC - May 16, 2006
- 2006 **Ohio Innocence Project and University of Cincinnati Law School**
Laboratory Tour and DDC Overview
DDC - May 1, 2006
- 2006 **University of Cincinnati Clinical and Lab Science Program**
"DNA Basics, Serology and Evidence Collection Workshop"
DDC - April 20, 2006
- 2006 **Kentucky Association of Criminal Defense Lawyers**
CLE Seminar:

- "Forensic DNA Basics & Legal Applications and Mock Crime Scene Workshop"*
DDC - March 16 - 17, 2006
- 2006 **Indiana Public Defender's Office**
CLE Seminar: *"Forensic DNA Basics & Legal Applications"*
Indianapolis, Indiana - February 24, 2006
- 2006 **Law Enforcement (Cincinnati area) Workshop**
"Collection of Evidence for DNA Analysis and Mock Crime Scene Workshop"
DDC - January 27, 2006
- 2005 **Central Ohio Association of Criminal Defense Lawyers**
CLE Seminar: *"DNA Trends and Forensic Applications"*
Columbus, Ohio - July 27, 2005
- 2005 **International Association for Identification: 90th International Educational Conference**
"Forensic DNA Technology"
Dallas, Texas - August 9, 2005
- 2005 **Greater Cincinnati Criminal Defense Lawyers Association**
CLE Seminar: *"DNA Trends and Forensic Applications"*
DDC - July 11, 2005
- 2005 **Law Enforcement Agencies in Fredricksburg and Travis County, Texas**
"DNA Basics and Collection of Evidence for DNA Analysis"
June 1 - 2, 2005
- 2005 **Law Enforcement Agencies in Southern Ohio**
"Collection of Evidence for DNA Analysis and Mock Crime Scene Workshop"
DDC - January 22, 2005; February 18, 2005; March 4, 2005; March 15, 2005;
March 23, 2005; May 27, 2005; July 29, 2005
- 2004 **DNA Diagnostics Center: Cincinnati Law Enforcement Agencies**
"Collection of Evidence for DNA Analysis and Mock Crime Scene Workshop"
DDC Open House- August 19, 2004
- 2004 **University of Cincinnati: Clinical Laboratory Science Program**
"Molecular Applications in Forensics"
DDC - April 12, 2004
- 2004 **Corporate Accounts**
"Forensics Overview"
DDC - March 17, 2004
- 2004 **HIT Conference (Homicide Investigators of Texas)**
"DNA Diagnostics Center Presentation"
Ft. Worth, Texas - March 2, 2004
- 2003 **DNA Diagnostics Center (upper management)**
"CODIS Presentation"
November 12, 2003
- 2003 **DNA Diagnostics Center (upper management)**
"AFQAM Presentation"
October 10, 2003

2003 **DNA Diagnostics Center (DDC departments)**
"2004 Forensic Overview"
March 6, 2003

2003 **DNA Diagnostics Center (laboratory)**
"AAFS Presentation"
February 27, 2003

2002 **DNA Diagnostics Center (upper management)**
"Collection of Evidence for DNA Analysis"
December 8, 2002

2002 **Police Academy - Cuyahoga County Coroner's Office**
"Collection of Evidence for DNA Analysis"
Cleveland, Ohio - January 22, 2002

2002 **CCCO Forensic Pathologists Meeting**
"STR Analysis and Probability Statistics"
Cleveland, Ohio - January 4, 2002

2001 **Independence School System (High school)**
"Forensic Science Techniques and DNA Analysis"
Cleveland, Ohio - May 5, 2001

2001 **Women In Science: Career Workshop**
"Hands-On Workshop in Forensics"
Cuyahoga Community College
Cleveland, Ohio - January 13, 2001

2000 **Ohio State Coroner's Association Education Conference**
"DNA Collection: A How-To Guide and its Application in Forensics"
Cleveland, Ohio - May 5, 2000

2000 **Moreland Hills Police Department**
Tour of Cuyahoga County Coroner's Office "DNA Analysis in Forensics"
Cleveland, Ohio - November 1, 2000 and November 7, 2000

2000 **Solomon Schecter Day School of Cleveland (Middle school)**
"Forensic Science Techniques and DNA Analysis"
Cleveland, Ohio - January 10, 2000

1999 **Society of Applied Spectroscopy Conference**
"Forensic Science Techniques and DNA Analysis"
October 28, 1999

1999 **Broadview Heights Detectives and Patrolmen**
"Crime Scene Seminar and Forensic Science Workshop"
Broadview Heights, Ohio - September 30, 1999

1999 **Twinsburg High School**
"Forensic Science Techniques and DNA Analysis"
Cleveland, Ohio - April 13, 1999

**PROFESSIONAL
ASSOCIATIONS:**

International Society for Forensic Genetics

American Academy of Forensic Sciences
Association of Forensic Quality Assurance Managers
Midwestern Association of Forensic Scientists

TESTIFIED AS
EXPERT WITNESS:

Canton, OH 2021 – Defense
Sidney, OH 2021 – Defense; hearing
Delaware, OH 2020 – Defense
Cleveland, OH 2020 – Defense
Fairfield, OH 2020 – Defense; hearing
Battle Creek, MI 2019 – Defense
Circleville, OH 2019 – Defense
Painesville, OH 2018 – Defense
Cleveland, OH 2018 – Defense
Clearwater, FL 2018 – Defense; hearing
Columbus, OH 2018 – Defense
Cleveland, OH 2018 – Defense
Athens, OH 2018 – Defense
Columbus, OH 2018 – Defense
Colorado Springs, CO 2017 – Defense
Fairfield, OH 2017 – Prosecution; deposition
Dayton, OH 2017 – Prosecution
Fairfield, OH 2017 – Civil; deposition
Fairfield, OH 2017 – Defense; deposition
Delaware, OH 2017 – Defense
Cherry Hill, NJ 2017 – Civil/Defense
Covington, KY 2017 – Defense
Delaware, OH 2017 – Defense
Gainesville, FL 2017 – Defense
Lebanon, OH 2017 – Defense; hearing
New York, NY 2017 – Civil/Defense; deposition
Canton, OH 2016 – Defense
Cleveland, OH 2016 – Defense
Cleveland, OH 2016 – Defense
Cleveland, OH 2016 – Defense
Lebanon, PA 2016 – Defense
Warsaw, NY 2015 – Defense
Columbus, OH 2015 – Defense
Akron, OH 2015 – Defense
Tampa, FL 2015 – Defense
Ft. Lauderdale, FL 2015 – Defense
Frankfort, KY 2015 – Defense
West Palm Beach, FL 2015 – Defense
West Palm Beach, FL 2015 – Defense
Jacksonville, FL 2015 – Defense
West Palm Beach, FL 2014 – Defense
Fairfield, OH 2014 – Defense; deposition
Tampa, FL 2014 – Defense
Fairfield, OH 2014 – Defense; deposition
Xenia, OH 2014 – Defense
Orlando, FL 2014 – Defense
Fairfield, OH 2014 – Defense; deposition
Washington, DC 2014 – Defense
Ft. Myers, FL 2014 – Prosecution

Fairfield, OH 2014 – Defense; phone testimony
Pampa, TX 2014 – Defense
Columbus, OH 2014 – Defense
Medina, OH 2014 – Defense
Gainesville, FL 2013 – Defense
Zanesville, OH 2013 – Defense
Fairfield, OH 2013 – Defense; deposition
Cincinnati, OH 2013 – Defense
Akron, OH 2013 – Defense
Cincinnati, OH 2013 – Defense
Washington, DC 2013 – Defense
Lima, OH 2013 – Defense
Paducah, KY 2013 – Defense
Merrillville, IN 2013 – Defense
Fairfield, OH 2013 – Defense
Merrillville, IN 2013 – Defense
Washington, DC 2013 – Defense
Fayetteville, WV 2013 – Defense
Clearwater, FL 2013 – Defense
Portland, OR 2012 – Defense
Fairfield, OH 2012 – Defense
Fairfield, OH 2012 – Defense
Welland, ON 2012 – Defense
Akron, OH 2012 – Defense
Elyria, OH 2012 – Defense
Fairfield, OH 2012 – Defense
Fairfield, OH 2012 – Defense
Fairfield, OH 2012 – Prosecution
Taylorsville, KY 2012 – Defense
Wauseon, OH 2012 – Defense
Covington, KY 2012 – Defense
Accomac, VA 2012 – Civil
Fairfield, OH 2012 – Civil; deposition
Ottawa, IL 2012 – Prosecution/Defense
Fairfield, OH 2012 – Civil; deposition
Fairfield, OH 2012 – Defense; phone testimony
Columbus, OH 2012 – Defense
Fairfield, OH 2011 – Defense; phone testimony
Fairfield, OH 2011 – Defense; deposition
Aurora, IL 2011 – Defense
Eureka, CA 2011 – Defense
Toledo, OH 2011 – Defense
Toledo, OH 2011 – Defense
Fairfield, OH 2011 – Civil; deposition
Toledo, OH 2011 – Defense
Huntington, WV 2011 – Defense
Bradenton, FL 2011 – Defense
Crestview, FL 2011 – Defense
Jackson, TN 2011 – Prosecution
Fort Wayne, IN 2011 – Prosecution
Fairfield, OH 2010 – Defense; deposition
Covington, KY 2010 – Defense
Chagrin Falls, OH 2010 – Defense
Toledo, OH 2010 – Prosecutor
Lafayette, LA 2010 – Defense

Fairfield, OH 2010 – Defense; phone testimony
 Akron, OH 2010 – Defense
 Ft. Myers, FL 2009 – Prosecution
 Cuyahoga County, Cleveland, OH 2009 – Prosecution
 Wilmington, OH 2009 – Defense
 Lake City, FL 2009 – Defense
 Cincinnati, OH 2009 – Defense
 Lake City, FL 2009 – Defense
 Cincinnati, OH 2009 – Prosecution
 Ft. Myers, FL 2009 – Prosecution; deposition
 Fairfield, OH 2009 – Defense
 New York, N.Y. 2009 – Defense
 St. Petersburg, FL 2009 – Prosecution
 Cuyahoga County, Cleveland, OH 2009 – Prosecution
 Ft. Myers, FL 2008 – Prosecution
 Iron Mountain, MI 2008 – Defense
 Washington, D.C. 2008 – Defense
 Fairfield, OH 2008 – Prosecution; deposition
 Davenport, IA 2008 – Defense
 Cuyahoga County, Cleveland, OH 2008 – Prosecution
 Toledo, OH 2008 – Defense
 Cuyahoga County, Cleveland, OH 2007 – Prosecution
 Prestonburg, KY 2007 – Defense
 Whitman County, WA 2007 – jury trial; testify by phone; listen to 3 experts – Defense
 Livingston County, Pontiac, IL 2007 – Prosecution
 Cuyahoga County, Cleveland, OH 2007 – Voir Dire -Prosecution
 Washington, D.C. 2007 – Defense
 Cuyahoga County, Cleveland, OH 2006 – Prosecution
 Lima, OH 2006 – Defense
 Cincinnati, OH 2006 – Civil Matter; deposition
 Hamilton County, Cincinnati, OH 2006 Juvenile Court – Defense
 Lucas County, Toledo, OH 2005 – Defense
 Naval Station, Bremerton, WA, 2005 – Prosecution
 Hamilton County, Cincinnati, OH, 2005 – Defense
 State Attorneys Office Lee County, Ft. Myers, FL 2005 – Prosecution
 Ashland County and Richland County, OH 2002
 Cuyahoga County, Cleveland, OH 1999, 2000, 2001 and 2002

RECOGNITION/AWARDS:

1998	Open Scholarship , University of Toronto
1994	Seminar Series Award for Best Speaker, Department of Anatomy and Cell Biology, University of Toronto.
1992	Open Scholarship , University of Toronto
1991	Scarborough College Graduate Student Award , University of Toronto.

PUBLICATIONS:

Sheets, K.M., M. L. Baird, **J. A. Heinig**, D. Davis, M. Sabatini, D. B. Starr. 2017. A Case of Chimerism-Induced Paternity Confusion: What ART Practitioners can do to Prevent Future Calamity for Families.

Journal of Assisted Reproduction and Genetics. <https://doi.org/10.1007/s10815-017-1064-6>

Heinig, J.A. (2007) *The Use and Significance of Y-STR Testing*, The DDC Link: Forensic Newsletter, Fall, 2007.

Heinig, J.A. (2007) *DNA from Fingerprints*. Columbus Bar Association; Lawyer's Quarterly, Fall 2007.

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Heinig, J.A. (2007) *DNA from Fingerprints*. The DDC Link: Forensic Newsletter, April, 2007.

Youson, J.H., **Heinig, J.A.**, Khanam, S.F., Sower, S.A., Kawauchi, H., and Keeley, F.W. (2006) Patterns of proopiomelanocortin and proopiocortin gene expression and immunohistochemistry for gonadotropin-releasing hormones (1GnRH-I and III) during the life cycle of a nonparasitic lamprey: Relationship to this adult life history type. *Gen Comp Endo.*, 148:54-71.

Heinig, J.A. (2005) *DNA from Fingerprints*. Northern Kentucky Bar Association; August/September 2005.

Heinig, J.A., Keeley, F.W., Kawauchi, H., and Youson, J.H. (1999) Expression of proopiocortin and proopiomelanotropin during the life cycle of the sea lamprey (*Petromyzon marinus*). *J. Exp. Zool.* 283:95-101.

Filosa, M.F., Adam, I., Robson, P., **Heinig, J.A.**, Smith, K., Keeley, F.W., and Youson, J.H. (1999) A partial clone of the gene for AS protein of the lamprey *Petromyzon marinus*: A member of the albumin supergene family whose expression is restricted to the larval and metamorphic phases of the life cycle. *J. Exp. Zool.* In Press

Ficele, G., **Heinig, J.A.**, Kawauchi, H., Youson, J.H., Keeley, F.W., and Wright, G.M. (1998) Spatial and temporal distribution of proopiomelanotropin (POM) and proopiocortin (POC) mRNA during development of the sea lamprey: a qualitative and quantitative *in situ* hybridization study. *Gen. Comp. Endocrinol.*, 110:212-225.

Heinig, J. A., Keeley, F. W., Robson, P., Sower, S. A., and Youson, J. H. (1995). The appearance of proopiomelanocortin early in vertebrate evolution: Cloning and sequencing of POMC from a lamprey pituitary cDNA library. *Gen. Comp. Endocrinol.* , 99:137-144.

PRESENTATIONS:

Baird, M.L., **Heinig, J.A.**, Davis, D.L., Sheets, K., Kirkpatrick, B. and Starr, D.B. (2015) Alleged Father with Chimeric Germline Tissue. Presented at Promega 16th International Symposium on HID. Grapevine, TX October 12 - 15, 2015.

Sheets, K.M., Kirkpatrick, B., Baird, M.L., **Heinig, J.A.**, Davis, D.L., and Starr, D.B. (2015) Paternity Reclaimed: Ancestry Testing Reveals a Unique Case of Congenital Chimerism. Presented at The American Society of Human Genetics, Baltimore, MD; October 6-10, 2015.

Peterson, J.W., Baird, M.L., Reid, T.M., Kraemer, C.M., Hodge, D.M., Schuh, C.M., Deickhoner, C.L., Ahmed, M.B., **Heinig, J.A.**, Kahsar, M.D., Lee, S.C. and Lee, R.F. (2005) DDCplex™: The Use of Additional STR Loci for Solving Difficult Parentage and Sibship Tests. Promega 16th International Symposium on HID. Dallas, Texas September 25 - 29, 2005

- Gamble, R.L., Suzuki, K., **Heinig, J.A.**, Youson, J.H., Keeley, F.W., and Sower, S.A. (1997) Isolation of cDNA encoding the precursor to lamprey gonadotropin-releasing hormone-I from the brain of the sea lamprey, *Petromyzon marinus*. Proceedings of the XIIIth International Congress of Comparative Endocrinology, Nov. 16-21, 1997. Yokohama, Japan. Advances in Comparative Endocrinology, S. Kawashima and S. Kituyama, eds. Monduzzi Editore, Bologna, pp. 735-738
- Heinig, J. A.**, Youson, J. H., and Keeley, F. W. (1996). Expression of two forms of POMC (proopiomelanocortin) during metamorphosis and sexual maturation of the lamprey. The FASEB Journal, Vol. 10 (No. 3). Presented at Experimental Biology '96, Washington, D.C., April 16 - 20, 1996.
- Heinig, J. A.**, Keeley, F. W., and Youson, J. H. (1994). Sequence of a POMC cDNA clone from lamprey pituitary. American Zoologist, Vol. 34 (No. 5). Presented at American Society of Zoologists, St. Louis, Missouri, January 4 - 8, 1995.
- Heinig, J. A.** and Youson, J. H. (1991). Freeze fracture and morphometric analyses of zonulae occludentes in the anterior intestinal epithelium of adult lampreys during osmoregulation. Developmental Biology, Vol. 45 (No. 2). Presented at American Association of Anatomists, New York, New York, March 11-15, 1992.